

Although the development can extend to many fertilizer nutrients, we have centered our development work to date on providing controlled release urea. Other nutrient fertilizers which can be used to provide controlled release fertilizer include, but are not limited to the following; ammonia, ammonium nitrate, ammonium sulfate, calcium nitrate, diammonium phosphate, monoammonium phosphate, potassium chloride, potassium nitrate, potassium sulfate, potassium phosphates, such as monopotassium phosphate, dipotassium phosphate, tetrapotassium pyrophosphate, and potassium metaphosphate, and sodium nitrate and combinations of these materials. The urea melt is maintained between 40% and +99.9% by weight urea; however, a preferred range of the melt would be between 65% and +99.9% and a most preferred range between 75% and +99.9% by weight urea. To provide other controlled release fertilizer, one or more other nutrient materials other than urea can be absorbed as long as the nutrients are in the fluid phase by being pure melt or by being solubilized in water or in the melt of another nutrient or combination of nutrients and/or water. For example, a full NPK fertilizer can be made by using urea, monoammonium phosphate, diammonium phosphates, and potassium chloride in various proportions and concentrations, and then blending the product with a filler to provide, for example, 29-3-4, 16-4-8, 10-10-10, 15-5-10, 15-0-15, 22-3-14, 20-28-5, and 12-6-6 control release fertilizers. Further, the nutrients can be in the fluid phase by being in a volatile substance such as e.g. ethanol or methanol as the solvent, which can be evaporated out as the material is solidified and dried. In the above manner, it is possible to prepare controlled release fertilizers containing various mixtures of nitrogen, phosphorus, and potassium as well as incorporation of various secondary nutrients (e.g. sulfur, calcium,